

217-782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

Oak Forest Hospital
Attn: Mr. Thomas R. Kennedy
15900 South Cicero Avenue
Oak Forest, Illinois 60452

Application No.: 85010011

I.D. No.: 031219AAI

Applicant's Designation:

Date Received: February 16, 2005

Subject: Physical Plant

Date Issued:

Expiration Date:

Location: 15900 South Cicero Avenue, Oak Forest

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of two natural gas and oil fired boilers rated at 59 mmBtu/hr, two natural gas and oil fired boilers rated at 40 mmBtu/hr, #2 fuel oil storage tanks: 3 @ 20,000 gal, 1 @ 6,000 gal, 2 @ 2,600 gal; 3 @ 2,000 gal, and emergency generator: 1 @ 1,000 kW, 6 @ 500 kW; 1 @ 350 kW. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of volatile organic material to less than 25 tons/year and nitrogen oxides, particulate matter, carbon monoxide and sulfur dioxide from this hospital to less than 100 tons/year, as further described in Attachment A. As a result, the source is excluded from requirements to obtain a Clean Air Act Program permit.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes the current permit(s) issued for this location.
2. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from each individual boiler in any one-hour period when burning distillate fuel oil exclusively to exceed 0.3 lbs/mmBtu.
3. No person shall cause or allow the emission of carbon monoxide into the atmosphere from each individual boiler to exceed 200 ppm corrected to 50% excess air.
4. Total operations and emissions of the four boilers shall not exceed the following limits:
 - a. Natural Gas Usage: 30.7 mmscf/month, 307 mmscf/year

<u>Pollutant</u>	<u>Emission</u>	<u>Emissions</u>	
	<u>Factor</u> <u>(Lb/mmscf)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Nitrogen Oxides (NO _x)	100	1.535	15.35
Carbon Monoxide (CO)	84	1.289	12.89
Particulate Matter (PM)	7.6	0.117	1.17
Volatile Organic Material (VOM)	5.5	0.084	0.84
Sulfur Dioxide (SO ₂)	0.6	0.009	0.09

These limits are based on fuel usage per year and standard AP-42 emission factors. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data.

- b. Fuel Oil Usage: 1,779 gallons/month, 10,670 gallons/year

<u>Pollutant</u>	<u>Emission Factor</u> <u>(Lb/mmscf)</u>	<u>Emissions</u>	
		<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Nitrogen Oxides (NO _x)	20	0.018	0.11
Carbon Monoxide (CO)	5	0.005	0.03
Particulate Matter (PM)	2	0.002	0.01
Sulfur Dioxide (SO ₂)	42.6	0.004	0.22

These limits are based on fuel usage per year and standard AP-42 emission factors. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data.

- 5a. Diesel fuel shall be the only fuel fired in the generator. The use of any other fuel shall require a revised permit.
- b. Total operations and emissions for all eight standby generators shall not exceed the following limits:

Operating Hours			
<u>(Hours/Month)</u>		<u>(Hours/Year)</u>	
84 Each Unit		500 Each Unit	
<u>Pollutant (Total all Eight Units)</u>	Emission Factors	Emissions	
	<u>(Lbs/Kw-Hr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Nitrogen Oxides (NO _x)	0.0322	5.83	35.00
Carbon Monoxide (CO)	0.0074	1.34	8.02
Sulfur Dioxide (SO ₂)	0.0033	0.59	3.54
Particulate Matter (PM)	0.0009	0.17	1.02
Volatile Organic Material (VOM)	0.0009	0.17	1.03

These limits are based on standard AP-42 emission factors of diesel fuel, and an applicant requested limit of 500 hours per year. Compliance with annual limits shall be determined from a running total of 12 months of data.

6. This permit is issued based on negligible emissions of volatile organic material (VOM) from the storage tanks. For this purpose total emissions shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
7. The Permittee shall not utilize distillate fuel oil (Grades No. 1 and 2) in the boiler and generators with a sulfur content greater than the larger of the following two values pursuant to 35 Ill. Adm. Code 214:
 - a. 0.28 weight percent, or
 - b. The weight percent given by the formula: Maximum weight percent sulfur = $(0.000015) \times (\text{Gross heating value of oil, Btu/lb})$.
 - c. Organic liquid by-products or waste materials shall not be used in these fuel combustion emission sources.
 - d. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 8a. The Permittee shall maintain monthly records of the following items:
 - i. Natural gas usage for the four boilers (per/month and per/year).
 - ii. Number 2 diesel oil usage for the four boilers (per/month and per/year).
 - iii. Electric generation (MWH) of the eight emergency generators.
 - iv. Operating hours for each of the four boilers, and the 8 emergency generator engines.
 - v. Sulfur content of #2 diesel oil used.
- b. These records shall be kept at a readily accessible location at the plant for at least 3 years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request.
- 9a. Within 90 days of a written request from the Illinois EPA, pursuant to 35 Ill. Adm. Code 201.282 the nitrogen oxides (NO_x) and carbon monoxide (CO) emissions from the four boilers shall be measured by an approved testing service, during conditions which are representative of the maximum performance. The Illinois EPA may provide additional time for the performance of this testing upon request for the Permittee which shows that it is not feasible to perform representative testing within 90 days.
- b.
 - i. The following methods and procedures shall be used for testing of emissions. Refer to 40 CFR 60, Appendix A for USEPA test methods:

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Molecular Weight	USEPA Method 3
Moisture	USEPA Method 4
Nitrogen Oxide	USEPA Method 7
Carbon Monoxide	USEPA Method 10
Hydrogen Chloride	USEPA Method 26

- ii. A test shall consist of three separate runs each at least 60 minutes in duration. Compliance shall be determined from the average of the runs provided that the Illinois EPA may accept the arithmetic mean of the runs in circumstances described in 40 CFR 60.8(f).
- c. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the tests. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that such shorter notification does not interfere with the Illinois EPA's ability to observe the testing.
- 10a. Organic liquid by products or waste materials shall not be used at this source without written approval from the Illinois EPA.
- b. The Permittee shall notify the Illinois EPA prior to any change in the type of fuel used at the source.

Please note that this permit has been revised to remove the medical waste incinerator as requested.

If you have any questions on this, please call George Kennedy at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:GMK:jar

cc: Region 1
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from this facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels (e.g., 100 tons/year for NO_x, CO, and SO₂ and 25 tons/year for VOM) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

E M I S S I O N S (Tons/Year)								
<u>Emissions Unit</u>	<u>Fuel</u>	<u>NO_x</u>	<u>CO</u>	<u>SO₂</u>	<u>PM</u>	<u>VOM</u>	Single <u>HAP</u>	Combined <u>HAPs</u>
4 Boilers	Natural Gas	15.35	12.89	0.09	1.17	0.84		
4 Boilers (Back Up Fuel)	#2 Oil	0.11	0.03	0.22	0.01			
8 Generators	#2 Oil	35.00	8.02	3.54	1.02	1.03		
Storage Tanks					<u>0.44</u>			
Totals		<u>50.46</u>	<u>20.94</u>	<u>3.85</u>	<u>2.64</u>	<u>1.87</u>	< 0.44	< 0.44

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